

REMARKS

This is in response to the Official Action that is currently outstanding with respect to the above-identified application.

At the outset, Applicants thank the Examiner for the courtesy accorded to their undersigned attorney during the course of telephone interviews regarding this case conducted on 1 November 2001 and 7 November 2001. During these telephone interviews, the following arguments along with the wording of the claims of this application as it relates to the prior art currently of record were discussed. Unfortunately, no substantive agreement was reached during either of these interviews.

Claims 3-5, 7 and 18 were presented for reconsideration in the last Amendment filed in the above-identified application. Claims 3-5, 7 and 18 stand rejected in the currently outstanding Official Action. By the foregoing Amendment, Claim 18 has been amended directly, and Claims 3-5 and 7 have been amended indirectly by virtue of their respective dependence upon amended Claim 18. A **"VERSION SHOWING THE CHANGES MADE TO THE CLAIMS"** is attached as required by the Rules. Accordingly, Claims 3-5, 7 and 18 as hereinabove amended will remain pending in this application upon the entry of the foregoing Amendment.

In the currently outstanding Official Action, the Examiner has:

1. Again acknowledged Applicants' claim of foreign priority under 35 USC 119(a)-(d), and confirmed the safe receipt of the priority document for this application by the United States Patent and Trademark Office.

2. Provided Applicants with a copy of a Notice of References Cited (PTO-892), copies of the newly cited references, and a copy of an interview summary (PTO-413) record concerning a vacation and correction of a previously issued Official Action.
3. Advised the Applicants of their obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the Examiner to consider the applicability of 35 USC 103(c) and potential 35 USC 102(f) or (g) prior art under 35 USC 103(a).
4. Rejected Claims 3-5, 7 and 18 under 35 USC 103(a) as being unpatentable over the Kadota et al. reference (U.S. Patent No. 5,818,550) in view of the Shirahashi et al reference (U.S. Patent 5,285,301), the Sato et al reference (U.S. Patent 6,081,305), and the Miyawaki et al reference (U.S. Patent 5,822,028).

With regard to items 1 and 2, further detailed discussion in these Remarks is not believed to be necessary.

With regard to item 3, Applicants hereby confirm that each of the presently pending claims was commonly owned at the time the invention herein claimed was made.

With regard to item 4, Applicant respectfully calls attention to the fact that Claim 18 has been amended hereinabove for the sole purpose of correcting the antecedent bases of all of the terminology utilized therein. Specifically, it has been recognized that the terms "said first insulative electrode" and "said second insulative electrode" located in subparagraph 3 of Claim 18 lack appropriate antecedent bases. To correct this, the above-quoted terms have been amended hereinabove so as to read -- said first insulative substrate -- and -- said second insulative substrate --, respectively. Entry of the foregoing Amendment in response to this communication is respectfully requested.

Applicants respectfully traverse the Examiner's substantive rejection of the claims presently pending in this application under 35 USC 103(a). The bases of this traversal are set forth below.

It will be recalled from the response to the previous Official Action in this case that it is Applicants' position that in the Kadota et al reference neither of the substrates disclosed includes thereon a light shielding frame layer. The Examiner apparently has agreed with this position in the currently outstanding Official Action.

Similarly, it will be recalled from the response to the previous Official Action in this case that it is Applicants' position that Claim 18 includes language indicative of the problem to which the present invention is addressed; namely, the reduction of the complexity present in the prior art of adhering a TFT substrate to a counter substrate in the manufacture of a liquid crystal display device.

In the currently outstanding Official Action, the Examiner has indicated that the Kadota et al reference discloses every element of the present claims *with the exception of a "black layer" around the perimeter of the liquid crystal display device*. Further, the Examiner asserts that it was well known in the art to use black regions around the perimeter of an active matrix device to prevent light leakage and to shield drive circuitry. In the latter regard, the Examiner asserts that evidence supporting his position is present in the secondary Shirahashi et al, Sato et al, and Miyawaki et al references. The Examiner, therefore, has concluded that all of the claims presently pending in this application are obvious under the terms of 35 USC 103(a).

Applicants respectfully disagree.

Preliminarily, it must be recognized that the Examiner has oversimplified the present claims in the currently outstanding Official Action. The claims specify not only "a light shielding frame layer disposed around the periphery of said display region" as recognized by the Examiner, but also that the light shielding frame layer is located on the first insulative substrate as not recognized by the Examiner.

It also should be recognized that the standards for the establishment of a so-called "*prima facie*" case of the obviousness of a claimed invention under 35 USC 103 are well settled. For example, it is stated in MPEP Section 2142 that:

"...(t)o establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all of the claim limitations. **The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. In re Vaack, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)**" **Emphasis added**

It is respectfully submitted that the Examiner's currently outstanding rejection fails to meet these standards.

The Shirahashi et al reference discloses the use of a black region BM around the perimeter of an active matrix device. More particularly, the black region BM in the Shirahashi et al reference is disposed on the counter substrate SUB2 (see, Shirahashi et al, Column 3, lines 36-45 and Fig. 3). Therefore, as evidence of the presence of a light shielding layer in an active matrix device, the Shirahashi et al reference essentially teaches nothing more than the prior art disclosed in the DESCRIPTION OF RELATED ART section, and in Figs 6 and 7, of the present application, i.e., a light shielding frame layer located on the counter electrode carrying substrate.

The situation with respect to the Miyawaki et al reference is similar. In particular, it is indicated at column 4, lines 4-5, of the Miyawaki et al reference that the black matrix 59 located at the periphery of the device is provided on the counter substrate 62 (see also Fig. 1a of the Miyawaki et al reference).

Applicants, therefore, respectfully submit that a combination of the Kadota et al reference either with the Shirahashi et al reference, or with the Miyawaki et al reference, lacks the same feature of the present invention as now claimed that is not present in the Kadota et al reference. Thus, all of the claim limitations of this application are not taught or suggested by the foregoing combinations of the prior art suggested by the Examiner. Accordingly, the foregoing combinations of prior art suggested by the Examiner are insufficient to support a rejection based upon obviousness under 35 USC 103(a) under the standards quoted above. A decision withdrawing these grounds of rejection of the presently pending claims in response to this communication, therefore, is respectfully requested.

In addition, the above requested withdrawal of the Examiner's rejection based upon combinations of the Kadota et al, the Shirahashi et al and/or the Miyawaki et al references is appropriate in this case because none of these combinations would result in (or suggest) the solution of the problem addressed (and solved) by the present invention.

In the latter regard, Applicants respectfully submit that the Examiner's presently outstanding rejection of the claims of this application over a combination of the Kadota et al reference with either of the Shirahashi et al or the Miyawaki et al references is based upon improper hindsight reasoning. Indeed, it is not seen how any of the latter combinations could render the presently pending claims of this application obvious under the terms of 35 USC 103(a) without incorporating teachings derived from Applicants' specification and claims. Accordingly, the inescapable conclusion again is that the Examiner has failed to make out an appropriate *prima facie* case of the obviousness of the presently pending claims according to the above-quoted standards based upon a combination of the Kadota et al reference with either the Shirahashi et al reference or the Miyawaki et al reference.

Still further, it is to be noted that the invention disclosed in the Kadota et al reference relates to an active matrix type color display device having a color filter provided on a substrate that carries switching elements formed thereon to drive pixel electrodes (see, Kadota et al at Column 1, lines 5-10). In this regard, the Kadota et al reference focuses on solving the problem of reducing the risk of damaging the color filter by sputtering when forming the transparent pixel electrodes of the color display device. Thus, the problem addressed by the Kadota et al reference is totally different from the problem addressed by the present invention, e.g., reducing the complexity of adhering a TFT substrate to a counter substrate in the manufacture of a liquid crystal display device.

A similar conclusion may be drawn from a comparison of the problems addressed by the Shirahashi et al reference or the Miyawaki et al reference with that of the present invention.

Thus, it will be seen that the Shirahashi et al reference is primarily concerned with the breakage of the outermost signal lines therein. Miyawaki et al, on the other hand, is primarily concerned with causing scattering of light within the liquid crystal layer separating the substrates. These problems also are so far removed from the problem of either the present invention or the problem dealt with by the Kadota et al reference as to indicate that the combinations suggested by the Examiner would have been very unlikely.

It, therefore, is respectfully submitted that there is absolutely no motivation (i.e., suggestion) within the four corners of the prior art relied upon by the Examiner that would lead a person of ordinary skill in the art at the time the present invention was made to modify the Kadota et al reference in view of either the Shirahashi et al reference or the Miyawaki et al reference for the purpose of reducing the complexity of adhering a TFT substrate and a counter substrate to one another as is done in the present invention.

Similar arguments apply to the Examiner's proposed combination of the Kadota et al reference with the Sato et al reference. Specifically, the Sato et al reference discloses a black (i.e., shaded) peripherally located portion (see Sato et al at Fig. 5, reference numeral 166). Nevertheless, the problems addressed by the Kadota et al reference and the Sato et al reference respectively are so different from one another that the combination thereof by a person of ordinary skill in the art so as to render the present invention unpatentable under 35 USC 103(a) as suggested by the Examiner would **not** have been likely at the time the present invention was made.

As mentioned previously, the purpose of the present invention unambiguously is to provide a reduction of the complexity present in the prior art of adhering a TFT substrate to a counter substrate in the manufacture of a liquid crystal display device. The Kadota et al reference focuses on the reduction of the risk of damaging its color filter by sputtering when forming the transparent pixel electrodes of the color display device. The Sato et al reference, on the other hand, is directed to the provision of enhanced light-fastness to the switching and drive circuit areas of a projection type active matrix device intended for use under conditions wherein the device is subject to irradiation by light in the millions of lux range (see Sato et al, Column 4, lines 41 to 53). This is accomplished in the Sato et al setting by a series of stacked, electrically interconnected layers defining selected shading areas. It is respectfully submitted that the purposes of the Kadota et al reference and the Sato et al reference and the present application are so different from one another that it clearly is unlikely that a person of ordinary skill in the art at the time the invention of this application was made would have been lead to combine them for any purpose, much less for the purpose addressed by the present invention.

Therefore, Applicant again respectfully submits that the combination of references suggested by the Examiner in the currently outstanding Official Action can only be justified by hindsight reasoning utilizing the disclosures contained in the present specification. As mentioned above, this constitutes hindsight reasoning that is not proper in determining the patentability of claims under 35 USC 103(a).

Reconsideration and withdrawal of the rejections under 35 USC 103(a) contained in the currently outstanding Official Action in this case, therefore, are respectfully requested in response to this communication for the reasons set forth in detail above.

For each, and all, of the foregoing reasons, Applicants believe that Claims 3-5, 7 and 18 of this application, as they will stand upon the entry of the foregoing Amendment, are in condition for allowance. Reconsideration and allowance of this application, therefore, are respectfully requested.

Applicants also believe that additional fees beyond those submitted herewith are not required in connection with the consideration of this response to the currently outstanding Official Action. However, if for any reason a fee is required, a fee paid is inadequate or credit is owed for any excess fee paid, you are hereby authorized and requested to charge and/or credit Deposit Account No. **04-1105**, as necessary, for the correct payment of all fees which may be due in connection with the filing and consideration of this communication.

Respectfully submitted,

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VERSION SHOWING CHANGES MADE TO THE CLAIMS

Additions shown underlined; Deletions shown in brackets.

IN THE CLAIMS:

Please amend Claim 18 as follows:

18. (Amended) An easy-to-manufacture liquid crystal display device, said device comprising:

a first insulative substrate on which picture element electrodes are aligned in a matrix configuration defining an image display region; and a second insulative substrate on which a plurality of counter electrodes are disposed;

wherein said first insulative [electrode] substrate and said second insulative [electrode] substrate are adhered to each other with a liquid crystal material interposed therebetween such that each said picture element electrode faces at least a portion of a corresponding one of said counter electrodes; and

wherein said first insulative substrate further includes thereon a plurality of switching elements connected respectively to said picture elements, line means for supplying signals to said switching elements, a plurality of color filters arranged to correspond to the picture element electrodes in said display region, a light shielding frame layer disposed around a periphery of said display region, and light shielding layers corresponding to said switching elements for shielding incident light thereon.